

**What is claimed is:**

1. A method of operating a system for generating electrical power from a source of input energy occurring at variable rates including first rates at which the input energy can be safely captured at high energy conversion efficiencies and second rates in excess of the first rates and at which capture of the input energy at the high energy conversion efficiencies is likely to cause mechanical damage to the system, the method comprising collecting, with a power collecting mechanism, the input energy when present at said first rates and driving an electrical generator with said collected energy for generating and transferring electrical energy, to an electrical load, at a high input energy conversion efficiency corresponding to a first mechanical impedance presented to the power collecting mechanism and, in response to the input energy arriving at said second rates, varying the impedance of said load for increasing the output current from the generator for reducing the input energy conversion efficiency of the generator for increasing the mechanical impedance of the generator.
2. A method of operating a system for generating electrical power from a source of input energy arriving at variable rates comprising capturing the input energy with a mechanism for converting the input energy to mechanical energy for driving an electrical generator for generating and transferring electrical energy to an electrical load, and, when the input energy exceeds a preselected rate, varying the impedance of the load for increasing the current to the load for decreasing the energy conversion efficiency of the generator for increasing the mechanical impedance of the generator presented to the energy capturing mechanism.

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